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ABSTRACT

There is increasing concern by medical experts in this country about the use of anabolic steroids by teenagers. Over one million Americans are believed to be currently using or have used the synthetic hormones in the past. While drug testing and a reduction in the supply of the drugs appear to be reducing the number of adult users, use by teenagers may be on the rise. Although anabolic steroids are mainly used to enhance athletic performance, they are also taken to improve physical appearance. In spite of the fact that anabolic steroids are associated with short term behavior and long term health problems and may function as gateway drugs, fewer than 25 percent of the nation's schools provide information about anabolic steroids. "Project Right Way: An Anabolic Steroid Education Program" addresses the need to provide accurate information about anabolic steroids and healthy alternatives to both adults and adolescents in order to enable individuals to make informed decisions concerning anabolic steroid use. The program provides situations, case studies, learning activities, worksheets, and questions and answers that can be utilized by individuals planning and implementing anabolic steroid education programs. (Contains 13 references.) (Author/LL)

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Project Right Way: An Anabolic Steroid Education Program

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ABSTRACT

There is increasing concern by medical experts in this country about the use of anabolic steroids. Over one million Americans are believed to be currently using or have used the synthetic hormones in the past. While drug testing and a reduction in the supply of the drugs appear to be reducing the number of adult users, use by teenagers may be on the rise. Although anabolic steroids are mainly used to enhance athletic performance, they are also taken to improve physical appearance. In spite of the fact that anabolic steroids are associated with short term behavior and long term health problems and may function as gateway drugs, fewer than 25% of the nation's schools provide information about anabolic steroids. Project Right Way: An Anabolic Streroid Education Program addresses the need to provide accurate information about anabolic steroids and healthy alternatives to both adults and adolescents in order to enable individuals to make informed decisions concerning anabolic steroid use. Several educational strategies are described that can be used by adults planning to implement anabolic steroid education programs.

Introduction

Many experts are concerned about the use of anabolic steroids especially by teenagers. It is estimated that more than 250,000 adolescents use or have used anabolic steroids (Buckley et al., 1988). The majority of these adolescents begin to use the drugs before the age of 16 years (Buckley et al., 1988). Although the majority of teenagers use anabolic steroids to improve athletic performance, as many as one-third of adolescents use them to improve physical appearance, self-esteem, and to gain approval

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from others (Buckley et al., 1988; USDHHS, 1990). With continued use, larger amounts and greater varieties of anabolic steroids are used to achieve the desired results increasing the likelihood that undesirable side effects will occur (USDHHS, 1990; USDHHS, 1991a).

Despite the fact that anabolic steroids pose both short term and long term health risks, many schools do not provide adequate information to enable students to make informed decisions concerning anabolic steroid use (White, Richardson, Grosshans, Perkins, & Murdock, 1987). Though specific information is lacking about the number and types of school-based education programs, it is estimated that less than 25% of schools address anabolic steroids (USDHHS, 1991b).

Education plays a key role in preventing anabolic steroid use. Previous research suggests that education programs should be implemented for middle school and high school students including both athletes and nonathletes (Buckley et al., 1988; Terney & McLain, 1990). Since many anabolic steroid users initiate use at 15 years of age or younger (Buckley et al., 1988), prevention efforts should begin early. When these efforts are targeted exclusively toward athletes, a significant proportion of anabolic steroid users are excluded (Buckley et al., 1988). Thus, educational intervention efforts need to be directed toward a much broader population.

It is important that adolescents receive accurate unbiased information about anabolic steroids from individuals who are in contact with at-risk youth since much of the information about anabolic steroids may come from gymnasiums where the information is biased toward use (Johnson, Jay, Shoup, & Rickert, 1989). Information should be presented about both the potential positive effects and possible negative effects related to anabolic steroids (Clark, 1988). Education programs which use "scare tactics" (i.e., presentation of the negative aspects of anabolic steroid use) are not effective in changing adolescent athletes' attitudes toward anabolic steroid use (Bents et al., 1989). Recent studies suggest that knowledge of the facts related to anabolic steroids may increase the potential to use the drugs (Bosworth, Bents, Trevisan, & Goldberg, 1988; Chng & Moore, 1990).

Healthy alternatives to anabolic steroids such as proper nutrition and appropriate strength and conditioning programs should also be included in education programs. A program that emphasized principles of nutrition and strength development techniques was more effective in improving attitudes toward potential anabolic steroid use than either a program in which no alternatives or no intervention program was provided (Bents et al., 1990). If only the risks and negative aspects of use are presented to

adolescents, educators may lose credibility and adolescents will turn to other sources for information they want to hear. Once individuals have the facts and the alternatives, they can make better decisions about using anabolic steroids.

Project RIght Way: An Anabolic Steroid Education Program was developed to address the need to provide accurate information about anabolic steroids to both adults and adolescents in order to prevent use. Project RIght Way has two primary goals. The first of these goals is to provide education strategies to individuals who are in contact with adolescents. The second goal is to provide factual information about anabolic steroids and healthy alternatives to anabolic steroids so students can make informed decisions about using the drugs.

Several assumptions guided the development of the learning activities used in Project RIght Way. These assumptions are summarized below and are discussed in greater detail elsewhere.

1. Education programs should provide more than factual information.
2. Education programs should provide learning activities that will enable students to develop their own positions on drug use, clarify their values, and to make sound decisions.
3. Education programs should include learning activities that actively involve students.

The purpose of this paper is to provide sample learning activities and worksheets that can be utilized by individuals planning and implementing anabolic steroid education programs. Each of the sample activities illustrate a specific affective education technique. The situations and case studies that are included in the decision making and problem solving activities can be used in a variety of ways. They can be used as described or to present factual information about the effects of anabolic steroids and signs of use. They may also serve as the basis for role playing activities. In addition, basic information about anabolic steroids is also provided in a question and answer format. Recommended strategies for various groups and individuals for preventing anabolic steroid use as well as suggestions for helping students who may be using anabolic steroids are also included.

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Project Right Way: An Anabolic Steroid Education Program

Some Basic Assumptions

Substance abuse prevention programs are defined as planned strategies designed to preclude or reduce the use of drugs and alcohol that have a negative impact on the individual, the family, and the larger society. Negative impact includes the physical, mental, or social consequences which result in the reduction of optimum functioning at home, in school, at work, or in the community.

Drug education programs encompass more than simply supplying factual information about drugs and alcohol. Since many factors affect decisions to use drugs, providing facts and figures about the consequences of using drugs is not an effective prevention strategy when implemented by itself. Effective drug education programs must provide learning experiences and skills which will enable young people to function successfully in a rapidly changing society. People need to know the consequences of their actions without experiencing them directly, especially when the consequences can be jail terms, fines, expulsion from school or from athletic teams, or physical impairment.

The primary goal of drug education programs should be to assist young people to increase their knowledge while considering questions about drug use in relation to their values, goals, and responsibilities. Drug education programs should provide structured opportunities so individuals can develop their own positions on drug use, clarify their values, cope with their feelings, make sound decisions, and develop a positive self-image through hypothetical but realistic situations.

Affective education is an approach to education which attempts to strengthen self-esteem and improve individual and interpersonal communication skills. Affective education helps young people to "get in touch with their feelings" in order to communicate more effectively with others and to understand themselves better.

Several affective education techniques are briefly described below.

* **Values Clarification** - this approach involves assessing the alternatives to drugs and making informed choices based upon clearly established values. Values clarification allows students to discover their own values toward a specific behavior. After individuals understand their own values, and have practice in expressing them to others, they become more comfortable in justifying and expressing a decision not to use specific drugs or alcohol.

* **Self-Esteem Development** - this technique includes learning to accept feelings of joy, anger, fear, and disappointment; sharing aspects of oneself with other group members; and encouraging respect and acceptance of individual differences.

* **Role Playing** - helps students understand problem situations or value conflicts through simulated experiences. Role playing allows students to empathize with people in positions that may be very different than their own. It also provides a way of testing solutions without taking any great risks.

* **Problem Solving** - involves defining a problem or conflict confronting a group, listing possible alternative ways of solving the problem situation, investigating the consequences of the decision and choosing the most acceptable alternative for the group as a whole.

* **Decision Making** - involves examining drug abuse issues, problems, alternatives and possible consequences. Through shared feelings and communications, individuals are encouraged to make responsible decisions and to express these decisions in group support sessions.

Values Clarification Activities

Use the activity below as a homework assignment so students may have enough time to think about their answers. In class, record the number of students who responded yes, no, or maybe to the first part of each question. Ask students to share their answers with the class. After the students have shared their answers, explain that 50% of the best runners in the U.S. indicated they would take the pill that would kill them in a year. 52% of world class weight lifters and field competitors said they would take the drug that would kill them in 5 years. Compare class results with these results. Have students explain why they think the athletes responded this way.

Suggested questions for additional class discussion:
1. Are using pills and drugs to win unfair or cheating?
2. What is cheating?
3. What are some examples of cheating or unfair play in sports?
4. Are anabolic steroids a shortcut to better performance/improved appearance?

Values Clarification Worksheet

Directions: Read the following questions and circle your response. Explain your answer in the space provided.

1. If you could take a pill that would make you an Olympic champion but would kill you in a year, would you take it?
YES NO MAYBE

Explain.

Would you allow your best friend to take it?
YES NO MAYBE

Explain.

Would you allow your brother or sister to take it?
YES NO MAYBE

Explain.

2. If there was a drug that was so powerful that if you took it once, you would win every competition you entered for the next 5 years, but it would kill you 5 years after you took the drug, would you take the drug?
YES NO MAYBE

Explain.

Would you allow your best friend to take it?
YES NO MAYBE

Explain.

Would you allow your brother or sister to take it?
YES NO MAYBE

Explain.

3. If you were offered a drug to perform better and you were sure your drug use wouldn't be discovered, would you take it?
YES NO MAYBE

Explain.

Values Clarification Activities

Introduction

Value lines are an enjoyable and effective way of presenting issues to students, having them respond to statements, and having them interact with one another about their opinions and ideas. Students begin the activity by standing in the center of the room. Students will move along an imaginary line according to whether they strongly disagree, disagree, agree, or strongly agree with a statement. After each statement, individual students can be asked to explain why they moved where they did. Two students at opposite ends of the line can be asked to explain why they strongly agreed or disagreed and to summarize each other's viewpoint.

Background Information

A variety of substances, procedures, or aids are used by Americans to look better, feel better, or to perform better. Americans often resort to quick fixes and shortcuts to look and feel better. We are bombarded with advertisements for pills, potions, powders, and gadgets which promise results fast. Using over the counter drugs and artificial aids is commonplace. Some of these products and aids are unproven scientifically, and may be unhealthy and unsafe. For athletes, using certain substances and artificial performance enhancing aids violates the spirit of fair play and competition and can result in disqualification.

"Many athletes have dealt with the issue of whether they have the right to alter their physical makeup to their own satisfaction, which is why most who have taken performance-enhancing drugs feel no shame or embarrassment about it. They view performance-enhancing drugs as simply another tool, along with good nutrition, food supplements, and scientific physical training methods, to be used to achieve a goal" (Wright & Cowart, 1992). Until society's attitudes toward the importance of winning at all costs and physical appearance are altered, prevention of anabolic steroid use will be difficult. Exploration of attitudes related to sports and training aids can be a useful first step in preventing and reducing anabolic steroid use.

Suggested Statements

The following suggested statements require that students use a combination of experience, knowledge, and opinions regarding use of various substances, procedures, or aids to improve athletic performance or appearance. Preparing overhead transparencies of each of the selected statements may be useful.

1. Using chemicals or artifical aids could destroy the chance to compete.
2. It is OK to drink colas or coffee to prepare for a big competition.
3. Performance enhancing drugs can mean the difference between winning and losing.
4. Using diet pills to lose weight is a healthy way to improve appearance.
5. Using a pain killing drug such as aspirin is an acceptable practice to enhance performance.

6. Vitamin supplements are an acceptable and healthy training aid.
7. Using drugs to heal an injury is an acceptable practice.
8. It doesn't matter how you win, but whether you win.
9. It is all right to tape an injury and give an injection to decrease the pain so an athlete can continue to play.
10. Using chemicals to achieve a goal is simply a training tool.
11. Any drug that is used to improve performance is unfair.
12. A positive and healthy lifestyle will improve appearance and athletic performance.
13. Using a substance to make more red blood cells is an acceptable training aid.
14. Winning or losing determines an athlete's self-worth.
15. Using amino acid supplements is a healthy nutritional aid to building muscle.
16. If I had the money, I would change my appearance through cosmetic surgery.
17. Keeping body weight low to delay development of female athletes for competitive purposes is an acceptable training method.
18. The purpose of competition is to encourage and reward excellence.
19. People have the right to change their physical makeup or appearance to their own satisfaction for any purpose.
20. Some chemicals are helpful during training for sports.
21. Some chemicals will give a competitive edge at the time of a game or contest.
22. No chemical will consistently improve physical performance over time.
23. Chemical use is incompatible with the spirit, motivation, and desire to succeed required in competitive sports.
24. Using performance enhancing drugs to maximize potential is unfair.
25. Personal excellence is more important than winning.

Decision Making and Problem Solving Activities

Preparing a plan and practicing for competitive activities helps to insure a successful performance. Yet, when people walk into the real thing, it is slightly different. Good training and practices try to simulate the real situation as much as possible. The same is true for dealing with drug issues. Planning to say no is great. Actually doing it can be much more difficult. One way to assist students to follow through with their decision to say no to drugs is to present students with real life situations. Deciding what they will say and do if they find themselves or their peers in a similar situation can be a helpful exercise.

Three situations for drug use are presented. If students are to remain independent in their decision about using anabolic steroids, they need opportunities to decide what course of action they will take and what their alternatives are in specific situations. Students should try to visualize each situation as realistically as possible. Encourage students to relate it to their own situations and experiences and to add whatever details will make the situation more meaningful for them. Provide worksheets so students can think about, visualize, and write down a) what they would think or say to themselves in the situation to avoid drug use; b) what they would say out loud to others in the situation to help them refrain from drug use; and c) what they would do in the situation to stand by their decision. A sample worksheet is provided.

Planning to Say No

Situation #1

Phil was into football, and his successes were the envy of many of his peers. At 15 he saw the progression of size, strength, and athletic ability (plus the scholarship offers) of guys at the gym where he worked out. Phil had reached a point in his strength development program where no matter what he did, there was no increase in his size or his strength. He was really frustrated. A friend at the gym felt that steroids had contributed to his personal improvements. Phil was impressed by the gains his friend had made, so Phil considered using anabolic steroids too.

Situation #2

The state track meet was coming up in a few weeks. Jill, a sprinter, would face the toughest competition of her young career. She had already received some athletic scholarship offers, but not from the college where her boyfriend had already been accepted. Her only hope to go to the same college as her boyfriend was to get an athletic scholarship. Her grades were not good enough to win an academic scholarship. Jill felt she had to win her events to get the scholarship. She had heard that some of the girls who had already qualified for the state finals were using anabolic steroids. Some of her teammates told her that she had better use the drugs, too, or she was sure to lose.

Planning to Say No

Sample Worksheet

If you are to remain independent in your decision about using anabolic steroids, you can practice deciding what course of action you will take and what your alternatives are in specific situations. This activity can also help you to understand why others may be tempted to use performance enhancing drugs and what you can do to help them to avoid the drugs. Pretend that you are the person in the situation described below that is considering using anabolic steroids. Try to imagine each situation as realistically as possible. Relate it to your own situations and experiences or relate the situation to someone you know. Add whatever details that will make the situation more meaningful to you. Then think about, visualize, and write down a) what you would think or say to yourself in the situation to avoid drug use; b) what you would say out loud to others in the situation to help you refrain from drug use; and c) what you would do in the situation to stand by your decision.

Situation #3

Wayne and Terri are lifting partners who work out at an inner city gym together. Both Wayne and Terri have entered a body building contest. Wayne had used steroids but had stopped before he met Terri. Wayne was certain that the only way that he could win the contest was to use steroids again. Wayne thought Terri ought to use them too. Wayne convinced Terri that "she could really be someone special if she took steroids." Terri also believed almost all female body builders were using steroids. Wayne told Terri that "You look good enough to enter the competition, but not good enough to win. You need something else to help you win. Since we do everything else together, we can do this together. You can inject me and then I'll inject you and then go work out. It'll be great and you'll be good enough to win. Let's do it together."

What would you think or say to yourself in this situation?

What would you say to others in this situation?

What actions would you take in the situation?

Decision Making and Problem Solving Activities

In making a decision whether to use drugs to improve appearance or to improve physical performance, individuals must think about the effects the substance might have on body, mind, and spirit, about the benefits and risks of using the drugs, and about how to become the most successful that he or she is capable of being. Decision making and problem solving activities allow students to examine issues, alternative soluctions and possible conseuences of those solutions without experiencing the consequences directly. Students need to know the consequences of their actions without directly experiencing them, especially when the consequences can include jail terms, fines, expulsion from school or from athletic teams, or serious health problems. Provide worksheets to help individuals make decisions and select an appropriate course of action before they are faced with making on-the-spot decisions outside of the classroom.

Weighing the Evidence

Directions: For each case study:

1. Identify the factors which led to the decision to use or not to use anabolic steroids.
2. List the consequences of the person's decision.
3. Describe why you believe this was a good or a poor decision for this person.
4. List alternatives which were available for this individual.

Case Study #1

Evelyn's dream had always been to be an Olympic gold medalist in the 100 meters. She dreamed that her name would go down in history as one of the best sprinters of all time. When she was told that athletes from other countries could not be beaten in the sprints because they had better coaching, better athletes and a knowledge of performance enhancing drugs, she was determined to prove them wrong. She had seen what those drugs had done to other female athletes. "They were always on the edge. The slightest thing would set them off. They were always angry. They couldn't sleep and had terrible workouts because they were so tired." She didn't want that. She had also seen the terrible depression they went through when they came off the drugs. "I couldn't put myself through all that." At 31 and 3 gold medals later, Evelyn believes she is still performing at her best. "In fact, I am turning in better performances than I did 4 years ago. My decision to remain a natural athlete has made it possible to achieve my goals and has prolonged my career."

Case Study #2

Jim was looking forward to his senior year on the basketball team. He was the starting point guard on a team of 5 returning starters who finished second in the state last year. Over the summer, Jim had prepared well for the upcoming season. He had followed the running and strength development program his coach had given him. Coach said it would make him stronger and quicker. Jim believed what his coach told him, but he thought it might not be enough to get a basketball scholarship. Jim started using steroids. Unfortunately, Jim won't be playing this season. He was dismissed from the team because he had beaten his girlfriend up after a party to celebrate the team's first victory of the season. Jim had taken steroids before going to the party because he was nervous and thought the steroids might give him a sense of control and confidence to handle any situation. He was angry when he left the party to drive his girlfriend home. They got into an argument over her conversation with another boy. Jim thought he was coming on to his girlfriend. The girlfriend tried to explain that she was talking to the boy about the team's victory earlier that night.

Weighing the Evidence

Sample Worksheet

In making a decision whether to use drugs to improve appearance or to improve physical performance, you must think about the effects the substance might have on your body, mind, and spirit, about the benefits and risks of using the drugs, and about how to become the most successful that you are capable of being. This worksheet will help you to examine issues, alternative solutions and possible consequences of those solutions without experiencing the consequences directly. It will also help you make decisions and select an appropriate course of action before you are faced with making on-the-spot decisions outside the classroom.

Case Study #3

At the age of 15, Michael felt skinny and weak compared to other boys. His classmates picked on him and teased him because he was small. He began to work out every day with a set of weights. He built up his muscles so that at age 16, he was 5'9" and weighed 165 pounds. But Michael wasn't satisfied. He wanted to be even bigger. That's when he discovered steroids. He bought some illegally at a local gym. Soon he was up to 193 pounds. But Michael began to have violent mood swings. He would fly into anger over little things. His grades began to slip. His family and friends noticed that he was often deeply depressed. At the age of 17, Michael shot himself in the head with a rifle and died. His sister said, "Steroids pulled the trigger."

1. Identify the factors which led to the decision to use or not to use anabolic steroids.

2. List the consequences of the person's decision.

3. Describe why you believe this was a good or a poor decision for this person.

4. List alternatives which were available for this individual.

Using Games to Teach Information About Anabolic Steroids

Well-known games such as Tic-Tac-Toe, volleyball, football, and baseball can be used to actively involve students in learning information about anabolic steroids. Student objectives could include but are not limited to recalling or explaining key terms, definitions, and ideas. Four examples are described here. Each game can be used to introduce new material or for reviewing and/or reinforcing material with which the students are already familiar.

For each of the games, prepare questions about anabolic steroids with three levels of difficulty: easy, medium, and difficult. Questions with acceptable answers can be typed or written on colored paper, coded for the degree of difficulty. Another way is to type or write the questions and answers on white paper and code them for difficulty by placing an E (easy), M (medium), or D (difficult) in one corner of the paper. Put the questions for each category into a separate envelope. Set a time limit for responses to questions. A typical time limit would be 30 seconds.

Tic-Tac-Toe

Classroom Organization

Divide students into partners.

Rules

Provide a diagram of the tic-tac-toe grid for students to draw on a piece of paper (Figure 1). Xs or Os earned with correct answers to easy questions are placed in the corner squares, medium questions in the middle squares, and difficult questions in the center square. Once a player selects a question difficulty level, their opponent reads the appropriate level question. The first player answers and if correct, places their symbol, X or O, in the tic-tac-toe grid.

Missed questions are returned to the envelope and remain in play until answered correctly. Players continue taking turns until the game is won or a draw is declared. A new game is started and play continues until all questions have been answered correctly.

Variation

Students are divided into 2 teams. The teacher or a student may read the questions if desired. The teacher can decide whether or not to supply correct answers to missed questions. The game is more challenging if the answers are not provided.

Figure 1 Tic-Tac-Toe Grid

EASY	MEDIUM	EASY
MEDIUM	DIFFICULT	MEDIUM
EASY	MEDIUM	EASY

Verbal Volleyball

Classroom Organization

Organize chairs or desks into 3 rows per team, facing each other.

Questions

Easy questions go to the passers (back row). Medium questions go to the setters (middle row) and difficult questions go to the spikers (front row).

Rules

The students are organized into two teams and a coin is flipped to determine which is the offensive team. The team serving the ball is the offense and the team receiving the ball is the defense. The individual in the offensive serving position draws and reads an easy question to the passers. If they answer correctly, the server draws and reads a medium level question to the setters. If they answer correctly, the server draws and reads a difficult question to the spikers. If they answer correctly, the referee draws and reads questions in the same order to the offensive team. The question series continues until one team misses. If the defense misses, a point is awarded to the offense. If the offense misses, a side out is awarded to the defense and team members rotate. By rotating, each student has the opportunity to respond to questions at all three levels of difficulty. Points can be scored only by the offensive team.

Penalties

Penalties are assessed by the referee for answering out of turn, or any inappropriate classroom behavior. For defensive team penalties, a point is awarded to the offensive team. For offensive team penalties, side out is awarded to the defensive team.

Variations

The game may be focused on individuals, small groups, or the entire team depending on how the teacher wants to direct who may respond to the questions.

Football Follies

Questions

Easy questions are worth 5 yards. Medium questions are worth 10 yards. Difficult questions are awarded 15 yards.

Rules

A diagram of a football field including yard markers is made on the chalkboard. The students are organized into teams and choose the order in which they are to respond to a question. A coin is flipped to determine which is the offensive team. The offensive team student whose turn it is to answer a question, chooses the difficulty level/yardage. The referee draws and reads the question. If the question is answered correctly the yards are awarded. The offensive team has four chances to make a first down or 10 yards. If they succeed, they continue with four more chances. If they fail, the defensive team is awarded the ball and has four opportunities to make a first down.

Penalties

Penalties are assessed by the referee for answering out of turn or for any inappropriate classroom behavior. The penalty cards are shuffled and one is drawn and assessed against the guilty team.

Materials

A white penalty flag is needed for the referee to drop when a penalty is to be assessed. Penalty cards

consisting of 5, 10, and 15 yard losses should be made on 5 x 8 cards. If the penalty is against the offensive team an additional card, "fumble," should be added. A paper football marked with an arrow placed on the playing field marks direction and progress toward a touchdown (7 points).

Baseball Boogaloo

Classroom Organization

The classroom should be organized into a diamond shape with chairs for bases and player positions.

Questions

Easy questions are worth a single. Medium questions are worth double. Difficult questions are worth a triple. Questions with a greater level of difficulty are required for this game. The most difficult questions are awarded a home run.

Rules

The students are organized into two teams and choose their batting order and field position. A roster must be submitted to the umpire. A coin is flipped to determine which team is at bat. The offensive team student whose turn it is to answer a question chooses the difficulty level/number of bases. The umpire draws and reads one question. The individual at bat has only one strike to correctly answer a question. If the question is incorrectly answered the team in the field has the opportunity to throw the batter out by answering a question of equal difficulty. Single and double questions are answered by the infield (as a group). Triple and home run questions are answered by the outfielders (as a group).

If two base runners reach base safely, the defense may attempt to answer two additional double questions in order to make a double play. If they miss one question, the lead runner advances one base. If they miss both questions, one runner scores and the other advances one base. Players advance bases as forced by the hitters following them.

Penalties

Penalties are assessed by the umpire for answering out of turn or for other inappropriate classroom behavior. If an offensive player breaks a rule, an out is then assessed. If a defensive player breaks a rule, a walk is given to the player at bat.

Sample Questions

EASY

If you use steroids you may suffer nervous tension, paranoia, and antisocial behavior. T

Male steroid users risk breast development. T

The age, size and sex of an individual can affect the effects steroid use will have on that person. T

If a woman takes steroids, they will have no effect on her menstrual cycle. F (Steroids disrupt the menstrual cycle.)

"Stacking" is a term used to describe the way a user takes his/her steroid dosages. T

"Cycling" is the term used to describe the time schedule for steroid dosages. T

Female steroid users risk the development of a shrill voice and loss of all hair. F (Females risk a deepening of the voice and development of excess facial and body hair.

Name a penalty for obtaining anabolic steroids without a doctor's prescription. (fine, jail term, disqualification)

Adolescents who use steroids will exceed expected height at maturity. F (Steroids cause stunted growth in adolescents due to premature closure of the growth plates of the long bones.)

Which of the following are possible side effects of using anabolic steroids?
A. liver damage
B. heart disease
C. uncontrollable anger
D. all of the above

Which one of the following groups of players is most likely to use anabolic steroids?
A. football players
B. wrestlers
C. body builders
D. baseball players

MEDIUM

The acne that appears as a result of steroid use is not serious and goes away when steroids are discontinued. F (If you use anabolic steroids, you risk serious acne that may leave permanent scars).

Men report an increased sex drive after initial steroid use, but decreased sex drive after repeated use. T

Steroids cause the testicles to shrink and sperm production to be reduced. T

What are the "muscle building" effects of anabolic steroids called? (anabolic effects)

What are the masculinizing effects of anabolic steroids called? (androgenic effects)

Which of the following can result from steroid use?
A. high blood pressure and water retention
B. irregular heart beat
C. kidney damage
D. decreased blood cholesterol

People who use anabolic steroids
A. may suffer withdrawal symptoms when they stop using
B. will always suffer severe side effects
C. cannot become addicted to these drugs
D. are not likely to begin using other drugs

What is one of the main motivating factors to use anabolic steroids?
A. pressure from a coach
B. peer pressure
C. obtaining an athletic scholarship
D. coping with stress and anxiety

Anabolic steroids purchased on the black market
A. are often made under sanitary conditions
B. may not contain active ingredients
C. are always sterile
D. make up a small percentage of anabolic steroid sales

Anabolic steroid use promotes
A. weight loss
B. sterility
C. increased height
D. mental well-being

Which one of the following is a reversible effect of anabolic steroids?
A. deeper voice in women
B. closure of the growth plates of the long bones
C. male pattern baldness
D. hypertension

DIFFICULT

How do anabolic steroids cause an increase in the size of a muscle? (Cause nitrogen and protein retention in muscles)

What kind of anabolic steroids has the longest lasting effect? (Injectable)

What kind of anabolic steroids remains in the body longest? (oral)

Name one medical use for steroids. (anemia, breast cancer, osteoporosis, asthma, malnourishment, endometriosis)

The performance enhancing effects of anabolic steroids include
A. prevention of injuries
B. increased aerobic endurance
C. increased muscle mass
D. all of these

The side effects of anabolic steroid use:
A. are almost always permanent
B. are always dangerous
C. are impossible to predict accurately
D. all of the above

Which one of the following is most frequently reported by teenagers as a source of anabolic steroids?
A. friends
B. dealers
C. athletic trainers
D. coaches

Which one of the following is a sign of anabolic steroid use?
A. clear skin
B. dry skin
C. profuse sweating
D. clear eyes

(Source: Tic-tac-toe by Mary Lawler and Using team games to teach health by Mark A. Croson and RoseAnn Benson. Health Education Teaching Ideas: Secondary, rev. ed. Richard Loya and Loren B. Bensley, Jr., eds. Reston, VA: AAHPERD, 1992.)

Preventing Anabolic Steroid Use

Education plays a key role in the prevention of anabolic steroid use. If education programs are to be successful, it will involve the coordination of efforts of many individuals and groups of individuals who influence adolescent's decisions to use anabolic steroids. The prevention activities of all these groups need to be coordinated to insure that adolescents are receiving consistent messages.

Anabolic steroid education should be incorporated into existing broad-based prevention efforts which reflect a student's whole environment of school, home, and community. Parents need to be educated and involved so that they understand the powerful role modeling they exhibit and to help them reinforce at home the school-based prevention efforts.

It is important that parents, students, school administrators, teachers, coaches, and community members unite in developing attitudes, actions, and activities that enable adolescents to perform at their own peak performance level and to look and feel their best through sensible nutrition, physical training, and positive reinforcement.

Strategies for Schools

* Develop a substance abuse policy with specific guidelines for anabolic steroid use.

*Provide anabolic steroid education training for staff members (administrators, teachers, counselors, and coaches).

*Include parents in anabolic steroid education programs.

*Provide school-wide coordination of all anabolic steroid education efforts.

Strategies for Teachers/Coaches

*Avoid sending mixed messages. Take a stand against steroid use - silence condones.

*Establish team policies which discourage the use of all ergogenic aids.

*Evaluate the progress of each individual. If gains are not satisfactory, make changes in the training program.

*Help to fill in the gaps between sacrificing everything for success and analyzing costs and benefits so that no inordinately high risks are involved.

*Have an understanding of steroid education objectives.

*Discuss dangers of steroid use with parents, other staff, and student athletes.

*Provide alternative strength development and conditioning programs.

*Clearly communicate the alcohol/drug policy to parents and students.

*Help student athletes learn how to cope with the stress of competition.

Strategies for School Counselors and Substance Abuse Professionals

*Become knowledgeable in all aspects of steroid abuse.

*Identify yourself as a consultant to parent groups, school teams, administrators, coaches, and teachers.

*Help to identify ways to increase your school's involvement in school-based training and conditioning of athletes, using high school athletic trainers and steroid abuse monitoring and prevention.

*Consult with coaches and team captains to define ways they can increase peer influence to reduce the incidence of drug abuse, including steroids.

*Assist coaches and health and physical education teachers to be better informed about the psychosocial dimensions of anabolic steroid use.

Strategies for Students

*Be drug-free.

*Understand the dangers of steroid use. Talk to parents, coaches, and teachers.

*Learn healthy methods of increasing strength.

*Exhibit good sportsmanship; keep competition in perspective.

*Encourage friends to be drug-free.

Strategies for Parents

*Help children keep sports in perspective and maintain a balance of activities.

*Encourage children to rely on their own talent, training, confidence, and determination to produce the performance level for which they are capable.

*Be aware of the messages you are sending. Stress realistic expectations and focus on the fun of participation rather than winning.

*Foster your children's self-esteem based on their intrinsic qualities, rather than appearance and performance.

*Help your children understand that there are no easy, quick answers or shortcuts to reaching their goals. Teach them to set short and long-term goals and to celebrate small successes and improvements. They need to know that these efforts take time and personal commitment.

*Be a healthy role model for a drug-free lifestyle.

*Help children accept their physical attributes and value their unique characteristics.

*Help children balance the desire to excel with a longer view of health and risk reduction.

*Encourage children to explore other opportunities for participation, expression, and accomplishment that are as important as athletics.

*Reinforce the message that the goal of activity programs should be for all-around education and development, and not to "create stars".

*Provide a secure and caring environment where children can grow, experiment, explore, take risks, and assume responsibility.

*Encourage children to learn nutritional factors, exercises, and strength-building strategies which will increase strength, improve appearance, and improve performance.

*Learn the facts about anabolic steroids. Share your concerns with your children. Encourage them to ask questions.

*Teach your children to value health as a priority over appearance, money, and popularity. Model this value in your daily life.

*Help your children understand that any health decision must consider long-range, as well as short-term consequences.

*Teach them decision-making skills, refusal skills, and guidelines for making healthy choices. Provide opportunities for them to make their own decisions and to accept the consequences of their decisions.

(Source: Steroids: A Resource Guide. The University of the State of New York, The State Education Department, Division of Pupil Health & Fitness, Bureau of School Health Education & Services, Albany, NY 12234)

One-to-One Counseling

It is important to be aware of the signs of anabolic steroid use so appropriate interventions and referrals can be initiated. The following are characteristics of anabolic steroid users. Since these could also be characteristics of normal adolescence, one should not automatically conclude that someone is using anabolic steroids.

1. Quick gains in size, weight, or strength.

2. Changes in eating habits such as doubling the intake of meat or other sources of protein.

3. Changes in sleep patterns such as insomnia.

4. Behavior changes such as mood swings from sullen and withdrawn to overly sensitive, easily provoked, irritable, less affectionate, uncooperative, or hostile.

5. Increase in activity workout intensity especially accompanied by a fixation on weight lifting and weight rooms.

6. Fluid retention or a puffy/bloated appearance.

7. Serious cystic type acne on the face, body, and trunk.

What is the role of adults in responding to behavior that may indicate a drug problem? There are five areas of responsibility.

1. Be attentive to specific behaviors that are interfering with athletic performance, academic work, or social relationships.

2. Keep track of the specific behaviors that concern you.Write down the specific behavior(s), when and where it (they) occurred, and what action was taken if any. Consult with other sources, documenting meetings with others who are in contact with the individual. Having a record of specific behaviors is essential when talking with the individual.

3. Talk with the individual about your concerns in a way that reduces defensiveness and denial. This should be done in a respectful manner. Express your concern and offer help. Listen to the individual's feelings and reactions. The following steps may be helpful. If you use these steps early and consistently, many problems can be prevented from becoming serious.

   Step One: Tell the individual that you are concerned and care about him or her.

Step Two: Share with the individual the specific behaviors that concern you. This should be done in an objective, non-judgmental manner.

Step Three: Tell the individual how you feel.

Step Four: Listen to what the individual has to say. A variety of responses can be expected. Many individuals will say nothing since they will not be prepared for this and will not be ready to talk. Some may become angry and tell you it is none of your business. Others may thank you and say they will make changes in their behavior. There may be some who may share with you a problem that goes beyond your training and expertise.

Step Five: State your expectations clearly and tell the individual what you want him or her to do.

Step Six: Tell the individual what you are willing to do to help him or her meet your expectations. Your responses can range from simply being a good listener to helping to arrange for a meeting with a counselor or other staff. If the individual chooses to say nothing, let them know that the door is open to discuss the matter at a future time.

4. If the individual's behavior does not change, additional help will be necessary. The school district's regular procedures for requesting assistance for a student should be used. Continue to be involved and provide support to the individual after a referral is made.

5. All school staff members need to provide support to the individual throughout the process, including after the individual has received the help he or she needs.

Source: SOS: Story of Steroids. TARGET,1124 Plaza Circle, PO Box 20626, Kansas City, MO 64195

Understanding Anabolic Steroids: Questions and Answers

What are anabolic steroids?

Anabolic steroids are synthetic chemical compounds which are designed to stimulate the same effects in the body as the primary male reproductive hormone testosterone. The chemical structures of the synthetic hormones have been changed in ways that slightly alter the tissues which they are most likely to affect and to increase the time that they remain effective in the circulation in the body. Testosterone has both androgenic (masculinizing) and anabolic (building) functions. An androgenic function of testosterone is to stimulate and maintain the male sex organs. Anabolic functions of testosterone include stimulating development of bones and muscles. Although drug companies have attempted to isolate the anabolic effects and minimize the androgenic effects, none of the synthetic compounds provides the anabolic effect without the androgenic effect.

What are anabolic steroids used for?

Medical uses of anabolic steroids include treatment of certain kinds of breast cancer in women, certain types of anemia, kidney disease, osteoporosis, and rare diseases in males who don't produce enough testosterone.

Who uses anabolic steroids?

Steroid use may begin as early as age 15 by some athletes and people who just want to develop muscled bodies without doing the necessary work. Athletes such as football players, weight lifters, body builders and wrestlers use anabolic steroids to increase muscle mass, strength, and endurance hoping to improve their athletic performance. There is increasing evidence that some swimmers, runners, and cyclists are beginning to use anabolic steroids to increase cardiorespiratory endurance. Nonathletes commonly use them to improve appearance and to increase self-confidence. Some people use them because they believe they will be more popular. Males are more likely to use them than females.

How are anabolic steroids used?

Anabolic steroids can generally be divided into two categories: those that are taken orally and those that are injected into muscles. Injected steroids are usually oil based and have a longer lasting effect. Potency of the hormone is reduced with oral administration but the effect is more immediate. Oral anabolic steroids appear to be more damaging to the liver. Injectable steroids are broken down over a period of weeks while orally taken steroids are broken down by the liver in about 24 hours. Individuals often "stack" anabolic steroids. "Stacking" refers to using several different types of steroids to maximize the anabolic effect while attempting to minimize the side effects. Users will usually take a combination of different strengths of pills and injections. Individuals may also cycle anabolic steroids. Cycling involves using different anabolic steroids over 6 to 12 week periods. During a 12 week cycle, low doses of one steroid may be used. Additional steroids in increasing doses are added during the cycle until the fifth through the seventh weeks when the doses peak. After the seventh week, the procedure is reversed. A four to eight week drug-free period follows the 12 week drug cycle. It is common for users to lengthen the cycles and reduce the drug-free periods.

Do anabolic steroids benefit athletic performance?

When combined with weight training and an adequate diet, anabolic steroids can be effective in increasing muscle mass, body weight, and strength. They may also increase speed but they do not increase cardiorespiratory endurance or prevent injuries. Anabolic steroids may allow the user to train at higher intensities and to train more often. Thus, any beneficial effects are due to an increased training stimulus rather than to the anabolic steroids themselves.

What are the side effects of anabolic steroids?

There are a variety of side effects which accompany anabolic steroid use. The majority of these side effects appear reversible when use is stopped but some, especially those in women, appear to be permanent. Women develop masculine characteristics such as shrinkage of breast tissue, increased facial and body hair, and menstrual irregularities. Women also experience deepening of the voice, thinning hair leading to baldness, wider shoulders, and clitoral enlargement. Men often experience testicular atrophy, breast enlargement, prostate enlargement, decreased sperm count, sterility, impotence, and loss of hair leading to male pattern baldness. Additional problems associated with anabolic steroid use include suppression of the immune system, increased risk of injury, increased risk of AIDS (associated with injectable anabolic steroids), altered blood lipids, increased blood pressure, liver dysfunction, and increased risk of certain types of cancer, heart attacks, and strokes. Adolescent users risk premature closing of the growth plates of the long bones resulting in shortened stature.

What are some signs of anabolic steroid use?

Physical signs of anabolic steroid use include severe acne, especially on the face, chest and upper back, purple or red spots on the body, severe sweating (even at rest), frequent headaches and nosebleeds, continuous bad breath odor, puffiness and/or bloating in the upper body, especially the face, yellowing of the skin and eyes, premature hair loss, and sudden increases in body weight, muscular development, and strength. A deeper voice and decreased breast size are signs which may occur in girls and women. Men may experience testicular shrinkage and increased breast tissue. Behavioral signs include insomnia, irritability, aggressive, combative behavior, exaggerated mood swings, uncontrollable outbursts of anger, and hyperactivity.

How do people get anabolic steroids?

Anabolic steroids are legally available through a doctor's prescription. However, about 80% of all anabolic steroids used are thought to be obtained illegally. Many of these black market drugs are counterfeits, developed in underground laboratories containing unknown or inappropriare ingredients, and they are frequently manufactured in substandard environmental conditions. These counterfeit drugs are often packaged with deceiving labels that lead the buyer to believe that the drugs were manufactured by legitimate companies. These black market drugs are sold in some magazines, gyms, fitness centers and places where weight lifters might gather. Anabolic steroids are often distributed to athletes by other athletes, and, in some cases, coaches and personal trainers. It is believed that about 20% obtain the drugs from health care professionals, including doctors, pharmacists, and veterinarians.

Are anabolic steroids illegal?

Yes. In 1990, anabolic steroids were added to Schedule III of the Federal Controlled Substances Act. Schedule III drugs can only be obtained with a doctor's prescription and they can lead to physical or mental dependence. According to this act, possession and distribution of anabolic steroids without a prescription is illegal. Examples of Schedule III substances are stimulants, depressants, and narcotic drugs like codeine. Penalties for illegal possession or distribution of scheduled drugs include prison sentences and/or fines.

Can people become addicted to anabolic steroids?

Anabolic steroids may be more psychologically or physically addictive than recreational drugs. Anabolic steroid users become dependent on the drugs for a sense of goal achievement, security, self-esteem, and a variety of hormonal influences. Users often take very large doses which lead to a greater risk of dependency. Physical addiction occurs once the body adjusts to the synthetic drugs by reducing natural testosterone production. When the drugs are discontinued, there is a period of time when the testo-sterone level in the body is very low because it takes time for the production of natural testosterone levels to return to normal. During this period, the user may experience hormone withdrawal symptoms including depression, muscle aches, fatigue, anxiety, sexual impotence, and poor self-esteem. The user often takes mood altering drugs or more anabolic steroids to cope with these problems.